

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

U.S. Serial No. 10/784,569

Filed: FEBRUARY 23, 2004

Inventor: Uma Arun

DYNAMIC TUNING OF HANDS-  
FREE ALGORITHM FOR NOISE  
AND DRIVING CONDITIONS

*Filed via EFS*

Group Art Unit: 2644

Examiner: PENDLETON

**REVISED APPEAL BRIEF**

Board of Patent Appeals and Interference  
US Patent and Trademark Office  
PO Box 1450  
Alexandria, Virginia 22313-1450

Sir:

On May 9, 2005, Appellant filed a Notice of Appeal of a Final Rejection in the Final Office Action of March 23, 2006. The appeal covers claims 21 and 23-36 which were rejected on prior art grounds. The Notice of Appeal was received in the Patent Office on May 19, 2005.

Appellant filed a timely appeal brief on June 21, 2006. On October 10, 2006, the Patent Office rejected the brief on formal grounds and issued a Notice of Non-Compliant Appeal Brief. Accordingly, Appellant is hereby submitting this "Revised Appeal Brief." The Summary section has been revised to more closely follow the claim language and structure and to add more specific citations to supporting disclosure in the specification. No other changes to the required contents of the brief have been made.

**1. REAL PARTY IN INTEREST**

The real party in interest is Assignee General Motors Corporation, a corporation having an office and a place of business at 300 Renaissance Center, Detroit, Michigan, 48265-3000.

**2. RELATED APPEALS AND INTERFERENCES**

Appellant and the undersigned attorneys are not aware of any appeals or any interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

### **3. STATUS OF CLAIMS**

Claims 21 and 26 were rejected under 35 U.S.C. §103(a) as unpatentable over United States Patent Application Publication 2002/0097884 to Cairns in view of United States Patent 6,898,501 to Schubert.

Claims 23 and 27 were rejected under 35 U.S.C. § 103(a) as unpatentable over Cairns in view of Schubert in view of United States Patent 6,674,865 to Venkatesh.

Claims 21 and 26 were rejected under 35 U.S.C. §103(a) as unpatentable over United States Patent Application Publication 2004/0142672 to Stankewitz in view of Schubert.

Claim 24 was rejected as unpatentable over Stankewitz in view of Schubert in further view of United States Patent 5,850,458 to Tomisawa.

Claims 23 and 27 were rejected under 35 U.S.C. § 103(a) as unpatentable over Stankewitz in view of Schubert in view of Venkatesh.

Claim 25 was rejected under 35 U.S.C. § 103(a) as unpatentable over Cairns in view of Schubert in view of United States Patent Application Publication 2005/0130723 to Grivas.

Claims 28, 30-33, 35, and 36 were rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Grivas.

Claims 29 and 34 were rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Grivas in further view of Venkatesh.

Claims 21 and 23-36 are the claims on appeal. See, Appendix.

**4. STATUS OF AMENDMENTS**

All amendments have been entered.

## **5. SUMMARY OF CLAIMED SUBJECT MATTER**

In this summary of claimed subject matter, all citations are to the specification of United States Patent Application 10/784,569. Further, all citations are illustrative only and support for the cited element may be found elsewhere in the specification.

With respect to independent claim 21, it is directed to a method of tuning a hands-free system 133 in a mobile vehicle 110. The method comprises:

- a) receiving a plurality of vehicle condition inputs S304-S312, including at least one road input based on global positioning coordinates S304, via a vehicle communication bus; (pg. 14 line 1-pg. 17 line 31)

- b) creating a noise parameter S314 based on the vehicle condition inputs S304-S312; (pg. 18 lines 1-9) and

- c) adjusting a noise suppression algorithm of the hands-free system based on the created noise parameter S318. (pg. 18 lines 18-20)

Independent claim 28 is directed to a method of tuning a hands-free system 133 in a mobile vehicle 110. The method comprises:

- a) determining if the mobile vehicle 110 has moved onto a new road based on a GPS location S402; (pg. 18 lines 26-29)

- b) sending the GPS location to a call center based on the determination S406; (pg. 19 lines 2-10)

- c) receiving a road input from the call center in response to the sending S408; (pg. 19 lines 11-15) and

- d) adjusting a noise parameter for the hands-free system based on the received road input S414. (pg. 20 lines 1-9)

With respect to independent claim 31, it is directed to a method of tuning a hands-free system 133 in a mobile vehicle 110. The method comprises:

- a) receiving a GPS location from the mobile vehicle at a call center S406; (pg. 19 lines 2-10);

- b) determining a road input based on the received GPS location and a geographic information systems database S408; (pg. 19 lines 11-15); and

- c) sending the road input from the call center to the mobile vehicle S408. (pg. 19 lines 11-15).

Claim 33 is directed to a method of tuning a hands-free system in a mobile vehicle. The method comprises:

- a) receiving a GPS location at a telematics unit S402; (page 18 lines 26-29);
- b) determining a road input based on the received GPS location and a geographic information systems database S408; (pg. 19 lines 11-13 and lines 20-23); and
- c) adjusting a noise parameter for the hands-free system based on the determined road input S414. (pg. 20 lines 1-9)

**6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 21 and 26 were rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert.

Claims 23 and 27 were rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Venkatesh.

Claims 21 and 26 were rejected under 35 U.S.C. §103(a) as unpatentable over Stankewitz in view of Schubert.

Claim 24 was rejected as unpatentable over Stankewitz in view of Schubert in further view of Tomisawa.

Claims 23 and 27 were rejected under 35 U.S.C. §103(a) as unpatentable over Stankewitz in view of Schubert in view of Venkatesh.

Claim 25 was rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Grivas.

Claim 28, 30-33, 35, and 36 was rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Grivas.

Claims 29 and 34 were rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Grivas in further view of Venkatesh.



## 7. ARGUMENTS

### A. Claims 21 and 26 were rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert.

The §103(a) rejection of claims 21 and 26 is traversed. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, MPEP §2143.

Claim 21 requires that at least one road input is based on global positioning coordinates. This element is neither disclosed, nor taught or suggested by Cairns, as noted by the Examiner. The Examiner relies upon Schubert for such a teaching. However, at most, Schubert teaches that the current position of the vehicle and a geo-referenced map can estimate the bumpiness level that the vehicle will encounter. *See*, column 18, lines 32-36 of Schubert. The "bumpiness level" taught or suggested by Schubert is not the same teachings as the claimed "road input."

Additionally, there can be no motivation to combine the references, as Cairns unequivocally teaches away from the combination. As Cairns teaches in ¶12, the term vehicle conditions "is intended to *exclude* characteristics not related to the physical mechanical/electrical condition of the vehicle" (emphasis added). The Examiner's allegation that road inputs are a physical or mechanical condition of the vehicle is specious – a road input is, at most, a condition of a *road*, not a *vehicle* traveling on the road. Since Cairns explicitly teaches that the term is specifically intended to exclude characteristics not related to the condition of the vehicle, the Examiner cannot combine these references.

Appellant specifically traverses the Examiner's allegation that as "to claim 26, obviously a change in global coordinates which results in a road type (bumpiness) change (determined by geographical information map 350), would adjust the noise suppression algorithm appropriately." The Examiner is using Appellant's disclosures against her,

using impermissible hindsight. No such change is truly "obvious" and the Examiner provides no evidence that one of ordinary skill in the art would confuse a "vehicle" with a "road." Furthermore, as a matter of law, the Examiner's allegations fail to even properly allege a case of unpatentability under 35 U.S.C. § 103(a) based on "obviously."

This failure of the references is even more pronounced since Cairns' variable noise reduction algorithm based on vehicle conditions does not denounce itself as anything less than an ideal solution, and Schubert fails to pronounce its apparatus for facilitating reduction of vibration in a work vehicle having an active cab suspension system as ideal.

Withdrawal of the rejections to claims 21 and 26 is requested.

**B. Claims 23 and 27 were rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Venkatesh.**

The 103(a) rejection of claims 23 and 27 is traversed. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, MPEP §2143.

As noted above, there can be no motivation to combine the references, as Cairns unequivocally teaches away from the combination. As Cairns teaches in ¶12, the term vehicle conditions "is intended to *exclude* characteristics not related to the physical mechanical/electrical condition of the vehicle" (emphasis added). The Examiner's allegation that an external vehicle climate is a physical or mechanical condition of the vehicle is specious – an external vehicle climate is not a condition of the *vehicle*, but rather the environment experienced by the vehicle while traveling on a road. Since Cairns explicitly teaches that the term is specifically intended to exclude characteristics not related to the *condition of the vehicle*, the Examiner cannot combine these references.

Further, Appellant specifically traverses the statement that one "would have been motivated to use external climate since it relates to a physical condition of the

vehicle." First, external climate does *not* relate to the physical condition of the vehicle. The term "external" at least implies the environment outside the vehicle. Second, Venkatesh teaches a volume control system, rather than a method for tuning a hands-free system in a mobile vehicle. At most, Venkatesh teaches methods to ensure that enunciated sounds are audible over the sound within a vehicle, rather than methods to tune a hands free system to increase comprehension of spoken commands. There can be no motivation to combine these references.

Additionally, claims 23 and 27 depend directly from claim 21 and are therefore allowable for at least the same reasons as claim 21.

Withdrawal of the rejections to claims 23 and 27 is requested.

**C. Claims 21 and 26 were rejected under 35 U.S.C. §103(a) as unpatentable over Stankewitz in view of Schubert.**

The §103(a) rejection of claims 21 and 26 is traversed. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, MPEP §2143.

There can be no motivation to combine a method for suppressing disturbing noise and an apparatus for facilitating reduction of vibration in a work vehicle having an active cab suspension system. The rationale to modify or combine the prior art may be expressly or impliedly contained in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. MPEP §2144, *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir.1992). *See also In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (setting forth test for implicit teachings); *In re Eli Lilly & Co.*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990) (discussion of reliance on legal precedent); *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988) (references do not have to

explicitly suggest combining teachings); *Ex parte Clapp*, 227 USPQ 972 (Bd. Pat. App. & Inter. 1985) (examiner must present convincing line of reasoning supporting rejection); and *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993) (reliance on logic and sound scientific reasoning). The Examiner does not properly cite to any express or implied teachings in either Stankewitz or Schubert, as neither reference, alone or in combination, provides any such teaching. Therefore, the Examiner must be attempting to rely on either knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent established by prior case law. The Examiner makes no citation to any established scientific principles, or precedent established by prior case law, and therefore can only be relying on knowledge generally available to one of ordinary skill in the art.

However, the Examiner provides no evidence of the ordinary skill in the art. In a case such as this, where the Examiner is improperly attempting to combine a vehicle suspension reference with a reference relating to noise suppression, the Examiner's omission of any details regarding the level of skill of one in the art is especially telling. The mere fact that references can be combined is not sufficient to establish obviousness under 35 U.S.C. § 103(a). *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990), MPEP §2143.01.

Furthermore, Stankewitz teaches away from the combination with Schubert. Stankewitz teaches the desirability of a method that shortens the period of time for creating optimum call conditions and *does not necessitate any major technological or computational expense*. See, ¶5 of Stankewitz (emphasis added). The combination with Schubert, requiring computations for the current position of the vehicle and a geo-referenced map would then necessitate a major technological or computational expense (providing equipment to determine a current position, such as a GPS unit, and compare that position to a geo-referenced map) would defeat the purpose of Stankewitz. Any such modification would destroy the principle of operation of Stankewitz by requiring additional equipment and computations. See, MPEP §2143.01, *In Re Ratti*, 270 F.2d 810 (CCPA 1959).

Notably, the structure and function of Stankewitz and Schubert differ and are dissimilar. There is little structural similarity and functional overlap between the method of Stankewitz and apparatus of Schubert, and any similarities are not readily apparent.

See, MPEP 2141.01(a). Indeed, the PTO classification for each reference is different, and this difference provides *evidence* that the combination of references is improper. As the *Examiner has provided no evidence* that the combination of references is proper, this evidence must overwhelm any mere allegations from the Examiner.

Furthermore, there must be a reasonable expectation of success from the combination. MPEP §2143.02. Stankewitz teaches the desirability of a method that *shortens* the period of time for creating optimum call conditions and *does not necessitate any major technological or computational expense*. See, ¶5 of Stankewitz (emphasis added). The combination with Schubert, requiring computations for the current position of the vehicle and a geo-referenced map would then necessitate a major technological or computational expense (providing equipment to determine a current position, and compare that position to a geo-referenced map). These computations could then defeat the desire to shorten the period of time for creating optimum call conditions. These computations could then defeat the success of the combination – at the very least, one of ordinary skill in the art could be unsure of the likelihood of success of the combination, and the *Examiner has not provided any evidence to the contrary*. At the very least, one of ordinary skill in the art would recognize that the addition of a GPS system to the Stankewitz method would increase the technological expense, and would reduce the expectation of success.

Appellant specifically traverses the Examiner's allegation that as "to claim 26, obviously a change in global coordinates which results in a road type (bumpiness) change (determined by geographical information map 350), would adjust the noise suppression algorithm appropriately." The Examiner is using Appellant's disclosures against her and using impermissible hindsight. No such change is truly "obvious." Furthermore, as a matter of law, the Examiner's allegations fail to even properly allege a case of unpatentability under 35 U.S.C. § 103(a) based on "obviously."

Claim 26 depends directly from claim 21 and is therefore patentable over the combination of Stankewitz and Schubert for at least the same reasons.

Withdrawal of the rejections to claims 21 and 26 is requested.

**D. Claim 24 was rejected as unpatentable over Stankewitz in view of Schubert in further view of Tomisawa**

The rejection of claim 24 as unpatentable over Stankewitz in view of Schubert in further view of Tomisawa is traversed. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, MPEP §2143.

Claim 24 depends directly from claim 21 and is therefore patentable over the prior art for at least the same reasons.

Additionally, Stankewitz teaches away from the combination with Schubert and Tomisawa for similar reasons as outlined above. Stankewitz teaches the desirability of a method that shortens the period of time for creating optimum call conditions and *does not necessitate any major technological or computational expense*. See, ¶5 of Stankewitz (emphasis added). The combination with Schubert and Tomisawa, requiring computations for the current position of the vehicle and a geo-referenced map as well as calculating the characteristics of a sound wave having approximately the same amplitude and phase shifted 180 degrees from an air intake sound wave, then generating the sound wave with a sound wave generator (see abstract, Tomisawa) would then necessitate a major technological or computational expense (providing equipment to determine a current position, such as a GPS unit, and compare that position to a geo-referenced map as well as a sound wave generator and means to calculate the characteristics of the sound wave to be generated) would defeat the purpose of Stankewitz. Any such modification would destroy the principle of operation of Stankewitz by requiring additional equipment and computations. See, MPEP §2143.01, *In Re Ratti*, 270 F.2d 810 (CCPA 1959).

Withdrawal of the rejection to claim 24 is requested.

**E. Claims 23 and 27 were rejected under 35 U.S.C. §103(a) as unpatentable over Stankewitz in view of Schubert in view of Venkatesh.**

The §103(a) rejection of claims 23 and 27 is traversed. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2143.

Additionally, Stankewitz teaches away from the combination with Schubert and Venkatesh for similar reasons as outlined above. Stankewitz teaches the desirability of a method that shortens the period of time for creating optimum call conditions and *does not necessitate any major technological or computational expense*. See, ¶5 of Stankewitz (emphasis added). The combination with Schubert and Venkatesh, requiring computations for the current position of the vehicle and a geo-referenced map as well as filters, echo cancellers, gain control signals based on vehicle speed, controlling gains of a dither signal (see abstract, Venkatesh) would then necessitate a major technological or computational expense (providing equipment to determine a current position, such as a GPS unit, and compare that position to a geo-referenced map as well as echo cancellers and gain controls) would defeat the purpose of Stankewitz. Any such modification would destroy the principle of operation of Stankewitz by requiring additional equipment and computations. See, MPEP §2143.01, *In Re Ratti*, 270 F.2d 810 (CCPA 1959).

Additionally, claims 23 and 27 depend directly from claim 21 and are therefore allowable for at least the same reasons as claim 21.

Withdrawal of the rejections to claims 23 and 27 is requested.

**F. Claim 25 was rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Grivas**

The § 103(a) rejection of claim 25 is traversed. Claim 25 depends from claim 21 and is therefore allowable for at least the same reasons as claim 21.

**G. Claim 28, 30-33, 35 and 36 were rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Grivas.**

The §103(a) rejection of claims 28, 30-33, 35, and 36 is traversed. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See, MPEP §2143.

As noted above, there can be no motivation to combine the references, as Cairns unequivocally teaches away from the combination. As Cairns teaches in ¶12, the term vehicle conditions "is intended to *exclude* characteristics not related to the physical mechanical/electrical condition of the vehicle" (emphasis added). The Examiner's allegation that an external vehicle climate is a physical or mechanical condition of the vehicle is specious – an external vehicle climate is not a condition of the *vehicle*, but rather the environment experienced by the vehicle while traveling on a road. Since Cairns explicitly teaches that the term is specifically intended to exclude characteristics not related to the *condition of the vehicle*, the Examiner cannot combine these references.

The Appellant traverses the Examiner's statement that claims "28, 30, 33, 35, and 36 are met." Appellant does not understand what the Examiner is alleging, and in any event, it would appear that such an allegation is either irrelevant or, at best, not founded in law. The Examiner is reminded of the salutary benefits of providing a complete response and the benefits of providing a designation of the particular part of a reference relied upon in a rejection. See, MPEP §707,37 C.FR. § 1.104. Additionally, Appellant reminds the Examiner that the goal of examination is to clearly articulate any rejection early in the examination process so that the Appellant has the opportunity to provide evidence of patentability and otherwise reply competently at the earliest opportunity. See, MPEP §706.

With respect to claims 31 and 32, Appellant traverses the statement that "it was obvious to use a call center to determine a road input based on a received GPS location and database and to send that road input to the mobile vehicle for noise suppression." Again, the Examiner is using Appellant's own disclosures against her using



impermissible hindsight. The Examiner has provided no evidence to support this naked assertion.

Withdrawal of the rejection to claims 28, 31, and 32 is requested. In the event that "met" means "rejected," Appellant also requests withdrawal of the "rejection" to claims 30, 33, 35, and 36.

**H. Claims 29 and 34 were rejected under 35 U.S.C. §103(a) as unpatentable over Cairns in view of Schubert in view of Grivas in further view of Venkatesh**

The § 103(a) rejection of claims 29 and 34 is traversed. To maintain this § 103(a) rejection, the references, alone or in combination must teach or suggest each and every element of the claims.

Claim 29 depends from claim 28 and claim 34 depends from claim 33, and claims 29 and 34 are therefore patentable for at least the same reasons as claims 28 and 33 respectively. Withdrawal of the rejections to claims 29 and 34 is requested.

**SUMMARY**

The Appellant respectfully submits that claims 21 and 23-36 herein fully satisfy the requirements of 35 U.S.C. §§ 102, 103 and 112. In view of the foregoing, favorable consideration and passage to issue of the present application is respectfully requested. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

REISING, ETHINGTON, BARNES, KISSELLE, P.C.

/James D. Stevens/

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Date: December 11, 2006  
JDS/dim

**CLAIMS APPENDIX**

21. A method of tuning a hands-free system in a mobile vehicle, the method comprising:

receiving a plurality of vehicle condition inputs, including at least one road input based on global positioning coordinates, via a vehicle communication bus;

creating a noise parameter based on the vehicle condition inputs; and

adjusting a noise suppression algorithm of the hands-free system based on the created noise parameter.

23. The method of claim 21 wherein the plurality of vehicle condition inputs includes an external vehicle climate input based on the weather outside the vehicle.

24. The method of claim 21 wherein the plurality of vehicle condition inputs includes an audio-device input based on the type and intensity level of ambient noise.

25. The method of claim 21 wherein the road input is received from a call center using at least one of the group consisting of a wireless carrier system, a communication network and a land network.

26. The method of claim 21 further comprising determining a change in a type of road input based on the received road input, and wherein the noise suppression algorithm is adjusted in response to a change in the type of road input.

27. The method of claim 21 further comprising adjusting the noise suppression algorithm in response to at least one of the group consisting of an internal vehicle climate, an external vehicle climate, an audio-device modification, a change in the level of sound emitted by a vehicle engine component, an internal vehicle condition, and an external vehicle condition.

28. A method of tuning a hands-free system in a mobile vehicle, the method comprising:

determining if the mobile vehicle has moved onto a new road based on a GPS location;  
sending the GPS location to a call center based on the determination;  
receiving a road input from the call center in response to the sending; and  
adjusting a noise parameter for the hands-free system based on the received road input.

29. The method of claim 28 further comprising adjusting the noise suppression algorithm in response to at least one of the group consisting of an internal vehicle climate, an external vehicle climate, an audio-device modification, a change in the level of sound emitted by a vehicle engine component, an internal vehicle condition, and an external vehicle condition.

30. The method of claim 28 wherein the road input is received from the call center using at least one of the group consisting of a wireless carrier system, a communication network and a land network.

31. A method of tuning a hands-free system in a mobile vehicle, the method comprising:  
receiving a GPS location from the mobile vehicle at a call center;  
determining a road input based on the received GPS location and a geographic information systems database; and  
sending the road input from the call center to the mobile vehicle.

32. The method of claim 31 wherein the road input is received from the call center using at least one of the group consisting of a wireless carrier system, a communication network and a land network.

33. A method of tuning a hands-free system in a mobile vehicle, the method comprising:  
receiving a GPS location at a telematics unit;

determining a road input based on the received GPS location and a geographic information systems database; and

adjusting a noise parameter for the hands-free system based on the determined road input.

34. The method of claim 33 further comprising adjusting the noise suppression algorithm in response to at least one of the group consisting of an internal vehicle climate, an external vehicle climate, an audio-device modification, a change in the level of sound emitted by a vehicle engine component, an internal vehicle condition, and an external vehicle condition.

35. The method of claim 33 wherein the GPS location is received from a GPS unit via a vehicle communication bus.

36. The method of claim 33 wherein the GPS location is received in response to a determination that the mobile vehicle has moved onto a new road.

**Evidence Appendix**

None.

**Related Proceedings Appendix**

None.